

ABSTRACT

A new method to form MOS gates in an integrated circuit device is achieved. The method comprises forming a dielectric layer overlying a substrate. A polysilicon layer is formed overlying the dielectric layer. A silicon oxide layer is formed overlying the polysilicon layer. A masking layer is deposited overlying the silicon oxide layer. The masking layer is patterned to selectively expose the silicon oxide layer. Thereafter the polysilicon layer is oxidized to increase the thickness of the exposed silicon oxide layer. The thickened silicon oxide layer encroaches under the edges of the masking layer. The silicon oxide layer does not thicken under other interior areas of the masking layer. Thereafter the masking layer is removed. Thereafter the silicon oxide layer is etched to selectively expose the polysilicon layer where the silicon oxide layer did not thicken. Thereafter the exposed polysilicon layer is etched through to thereby form MOS gates in the manufacture of the integrated circuit device.